Complete Summary

GUIDELINE TITLE

Epididymitis. Sexually transmitted diseases treatment guidelines 2002.

BIBLIOGRAPHIC SOURCE(S)

Centers for Disease Control and Prevention. Epididymitis. Sexually transmitted Diseases treatment guidelines. MMWR Recomm Rep 2002 May 10;51(RR-6):52-3.

COMPLETE SUMMARY CONTENT

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
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SCOPE

DISEASE/CONDITION(S)

Epididymitis

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Prevention
Treatment

CLINICAL SPECIALTY

Family Practice
Infectious Diseases
Internal Medicine
Preventive Medicine
Urology

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Managed Care Organizations
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

- To update the 1998 Guidelines for Treatment of Sexually Transmitted Diseases (MMWR 1998;47[No. RR-1])
- To assist physicians and other health-care providers in preventing and treating sexually transmitted diseases (STDs)
- To present updated recommendations for the diagnosis and treatment of epididymitis

TARGET POPULATION

Men with signs and symptoms of epididymitis

INTERVENTIONS AND PRACTICES CONSIDERED

Note from the National Guideline Clearinghouse and the Centers for Disease Control and Prevention: These guidelines focus on the treatment and counseling of individual patients and do not address other community services and interventions that are important in sexually transmitted disease/human immunodeficiency virus (STD/HIV) prevention.

Diagnosis

1. Evaluation of signs and symptoms (e.g., testicular pain, tenderness; hydrocele; palpable swelling of the epididymis; testicular torsion)
2. Gram-stain smear of urethral exudate or intraurethral swab specimen for diagnosis of urethritis (i.e., $\geq$5 polymorphonuclear leukocytes per oil immersion field) and for presumptive diagnosis of gonococcal infection
3. Culture of urethral exudates or intraurethral swab specimen, or nucleic acid amplification test (either on intraurethral swab or first-void urine) for Neisseria gonorrhoeae and Chlamydia trachomatis
4. Examination of first-void uncentrifuged urine for leukocytes if the urethral Gram stain is negative; culture and Gram-stained smear of uncentrifuged urine
5. Syphilis serology and HIV counseling and testing

Treatment

1. Ceftriaxone or levofloxacin plus doxycycline (for epididymitis caused by gonococcal or chlamydial infection)
2. Ofloxacin or levofloxacin (for epididymitis caused by enteric organisms or for patients allergic to cephalosporins and/or tetracycline)

3. Bed rest, scrotal evaluation, analgesics as adjuvant therapy
4. Follow-up for clinical improvement, reevaluation of diagnosis and therapy in case of failure to improve; differential diagnosis
5. Referral of sex partners for evaluation and treatment
6. Instructions to patients to avoid sexual intercourse until they and their sex partners are cured
7. Considerations for patients with HIV infection

MAJOR OUTCOMES CONSIDERED

- Microbiologic cure
- Alleviation of signs and symptoms
- Prevention of sequelae
- Prevention of transmission

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Beginning in 2000, Centers for Disease Control and Prevention (CDC) personnel and professionals knowledgeable in the field of sexually transmitted diseases (STDs) systematically reviewed literature (i.e., published abstracts and peer-reviewed journal articles) concerning each of the major STDs, focusing on information that had become available since publication of the 1998 Guidelines for Treatment of Sexually Transmitted Diseases. Background papers were written and

tables of evidence constructed summarizing the type of study (e.g., randomized controlled trial or case series), study population and setting, treatments or other interventions, outcome measures assessed, reported findings, and weaknesses and biases in study design and analysis. A draft document was developed on the basis of the reviews.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Guideline Clearinghouse and the Centers for Disease Control and Prevention: When more than one therapeutic regimen is recommended, the sequence is alphabetized unless the choices for therapy are prioritized based on efficacy, convenience, or cost. For sexually transmitted diseases (STDs) with more than one recommended regimen, almost all regimens have similar efficacy and similar rates of intolerance or toxicity unless otherwise specified.

Among sexually active men aged <35 years, epididymitis is most often caused by Chlamydia trachomatis (C. trachomatis) or Neisseria gonorrhoeae (N. gonorrhoeae). Epididymitis caused by sexually transmitted enteric organisms (e.g., Escherichia coli) also occurs among men who are the insertive partner during anal intercourse. Sexually transmitted epididymitis usually is accompanied by urethritis, which often is asymptomatic. Nonsexually transmitted epididymitis that is associated with urinary-tract infections caused by Gram-negative enteric organisms occurs more frequently among men aged >35 years, men who have recently undergone urinary-tract instrumentation or surgery, and men who have anatomical abnormalities of the urinary tract.

Although most patients can be treated on an outpatient basis, hospitalization should be considered when severe pain suggests other diagnoses (e.g., torsion, testicular infarction, or abscess) or when patients are febrile or might be noncompliant with an antimicrobial regimen.

Diagnostic Considerations

Men who have epididymitis typically have unilateral testicular pain and tenderness; hydrocele and palpable swelling of the epididymis usually are present. Testicular torsion, a surgical emergency, should be considered in all cases, but it occurs more frequently among adolescents and in men without evidence of inflammation or infection. Emergency testing for torsion may be indicated when the onset of pain is sudden, pain is severe, or the test results available during the initial examination do not support a diagnosis of urethritis or urinary-tract infection. If the diagnosis is questionable, a specialist should be consulted immediately, because testicular viability may be compromised. The evaluation of men for epididymitis should include the following procedures.

- A Gram-stained smear of urethral exudate or intraurethral swab specimen for diagnosis of urethritis (i.e., ≥5 polymorphonuclear leukocytes per oil immersion field) and for presumptive diagnosis of gonococcal infection.
- A culture of intraurethral exudate or a nucleic acid amplification test (either on intraurethral swab or first-void urine) for N. gonorrhoeae and C. trachomatis.
- Examination of first-void uncentrifuged urine for leukocytes if the urethral Gram stain is negative. A culture and Gram-stained smear of this urine specimen should be obtained.
- Syphilis serology and human immunodeficiency virus (HIV) counseling and testing.

Treatment

Empiric therapy is indicated before culture results are available. Treatment of epididymitis caused by C. trachomatis or N. gonorrhoeae will result in a) microbiologic cure of infection, b) improvement of signs and symptoms, c) prevention of transmission to others, and d) a decrease in potential complications (e.g., infertility or chronic pain). As an adjunct to therapy, bed rest, scrotal elevation, and analgesics are recommended until fever and local inflammation have subsided.

Recommended Regimens

For epididymitis most likely caused by gonococcal or chlamydial infection:

- Ceftriaxone 250 mg intramuscularly in a single dose

  PLUS

- Doxycycline 100 mg orally twice a day for 10 days.

For epididymitis most likely caused by enteric organisms, for patients allergic to cephalosporins and/or tetracyclines, or for epididymitis in patients aged >35 years:

- Ofloxacin 300 mg orally twice a day for 10 days

  OR

- Levofloxacin 500 mg orally once daily for 10 days

Follow-Up

Failure to improve within 3 days of the initiation of treatment requires reevaluation of both the diagnosis and therapy. Swelling and tenderness that persist after completion of antimicrobial therapy should be evaluated comprehensively. The differential diagnosis includes tumor, abscess, infarction, testicular cancer, tuberculosis, and fungal epididymitis.

Management of Sex Partners

Patients who have epididymitis that has been confirmed or is suspected to be caused by N. gonorrhoeae or C. trachomatis should be instructed to refer sex partners for evaluation and treatment. Sex partners of these patients should be referred if their contact with the index patient was within the 60 days preceding onset of the patient's symptoms.

Patients should be instructed to avoid sexual intercourse until they and their sex partners are cured (i.e., until therapy is completed and patient and partner[s] no longer have symptoms).

Special Considerations

HIV Infection

Patients who have uncomplicated epididymitis and also are infected with HIV should receive the same treatment regimen as those who are HIV-negative. Fungi and mycobacteria, however, are more likely to cause epididymitis in immunosuppressed patients than in those who are immunocompetent.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

Throughout the 2002 guideline document, the evidence used as the basis for specific recommendations is discussed briefly. More comprehensive, annotated discussions of such evidence will appear in background papers that will be published in a supplement issue of the journal Clinical Infectious Diseases.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Appropriate diagnosis and management of epididymitis
- Prevention of transmission of gonococcal and chlamydial infection to sex partners
- Improvement of signs and symptoms (e.g., testicular pain and tenderness, hydrocele and palpable swelling)
- Decrease in potential complications of epididymitis, such as infertility and chronic pain

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

These recommendations were developed in consultation with public- and private-sector professionals knowledgeable in the treatment of patients with sexually transmitted diseases (STDs). They are applicable to various patient-care settings, including family planning clinics, private physicians' offices, managed care organizations, and other primary-care facilities. When using these guidelines, the disease prevalence and other characteristics of the medical practice setting should be considered. These recommendations should be regarded as a source of clinical guidance and not as standards or inflexible rules. These guidelines focus on the treatment and counseling of individual patients and do not address other community services and interventions that are important in sexually transmitted disease/human immunodeficiency virus (STD/HIV) prevention.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Centers for Disease Control and Prevention. Epididymitis. Sexually transmitted Diseases treatment guidelines. MMWR Recomm Rep 2002 May 10;51(RR-6):52-3.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1993 (revised 2002 May 10)

GUIDELINE DEVELOPER(S)

Centers for Disease Control and Prevention - Federal Government Agency [U.S.]

GUIDELINE DEVELOPER COMMENT

These guidelines for the treatment of patients who have sexually transmitted diseases (STDs) were developed by the Centers for Disease Control and Prevention (CDC) after consultation with a group of professionals knowledgeable in the field of STDs who met in Atlanta on September 26--28, 2000.

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Chairpersons: David Atkins, M.D., M.P.H., Agency for Healthcare Research and Quality, Rockville, MD; Kimberly A. Workowski, M.D., Division of STD Prevention, CDC and Emory University, Atlanta, GA.

Presenters: Adaora A. Adimora, M.D., M.P.H., University of North Carolina, Chapel Hill, NC; Michael H. Augenbraun, M.D., State University of New York (SUNY)

Health Science Center, Brooklyn, NY; Willard Cates, Jr., M.D., M.P.H., Family Health International, Research Triangle Park, NC; Jane Cecil, M.D., Johns Hopkins, Baltimore, MD; Lynne Fukumoto, UCLA School of Nursing, Los Angeles, CA; Margaret Hammerschlag, M.D., SUNY Health Science Center, Brooklyn, NY; Anne M. Rompalo, M.D., Johns Hopkins University, Baltimore, MD; Richard Rothenberg, M.D., Emory University School of Medicine, Atlanta, GA; Pablo J. Sanchez, M.D., University of Texas Southwestern Medical Center, Dallas, TX; Bradley Stoner, M.D., Ph.D., Washington University School of Medicine, St. Louis, MO; Jane R. Schwebke, M.D., Department of Medicine, University of Alabama, Birmingham, AL; Anna Wald, M.D., M.P.H., University of Washington, Seattle, WA; Cheryl K. Walker, M.D., Stanford University Medical Center, Stanford, CA; George D. Wendel, M.D., University of Texas Southwestern Medical Center, Dallas, TX; Karen Wendel, M.D., Johns Hopkins University, Baltimore, MD; Dorothy J. Wiley, Ph.D., UCLA School of Nursing, Los Angeles, CA; Jonathan M. Zenilman, M.D., Johns Hopkins University, Baltimore, MD.

Moderators: King K. Holmes, M.D., Ph.D., Center for AIDS and STDs, University of Washington, Seattle, WA; Edward W. Hook, III, M.D., University of Alabama, School of Medicine, Birmingham, AL; William McCormack, M.D., SUNY Health Science Center, Brooklyn, NY.

Rapporteurs: John M. Douglas, Jr., M.D., Denver Department of Public Health and University of Colorado Health Science Center, Denver, CO; H. Hunter Handsfield, M.D., University of Washington and Public Health-Seattle & King County, Seattle, WA; Walter Stamm, M.D., University of Washington Medical Center, Seattle, WA.

Consultants: Gail Bolan, M.D., California Dept. of Health, Berkeley, CA; Toye H. Brewer, M.D., University of Miami, Miami, FL; Virginia A. Caine, M.D., Indiana University School of Medicine, Indianapolis, MN; Connie Celum, M.D., M.P.H., University of Washington, Seattle, WA; Myron S. Cohen, M.D., University of North Carolina, Chapel Hill, NC; Thomas A. Farley, M.D., M.P.H., Tulane University School of Public Health and Tropical Medicine, New Orleans, LA; Laura T. Gutman, M.D., Duke University, Durham, NC; Penelope J. Hitchcock, D.V.M., M.S., National Institute for Allergy and Infectious Diseases, NIH, Bethesda, MD; Sharon Hillier, Ph.D, Magee Women´s Hospital, Pittsburgh, PA; Franklyn N. Judson, M.D., Denver Department of Health, Denver, CO; David Martin, M.D., LSU Medical Center, New Orleans, LA; Daniel M. Musher, M.D., Veterans Affairs Medical Center, Houston, TX; Newton G. Osborne, M.D., M.P.H., Howard University Hospital, Washington, DC; Jeff Peipert, M.D., M.P.H., Women and Infants Hospital, Providence, RI; Peter Rice, M.D., Boston Medical Center, Boston, MA; Mary Sawyer, M.D., Emory University, Atlanta, GA; Jack Sobel, M.D., Wayne State University, Detroit, MI; David Soper, M.D., Medical University of South Carolina, Charleston, SC; Lawrence R. Stanberry, M.D., Ph.D., University of Texas Medical Branch, Galveston, TX; Barbara Stoll, M.D., Emory University School of Medicine, Atlanta, GA; Richard Sweet, M.D., Magee Women´s Hospital, Pittsburgh, PA; Eugene Washington, M.D., UCSF/Mt. Zion Medical Center, San Francisco, CA; Heather Watts, M.D., National Institutes of Health, Bethesda, MD.

Liaison Participants: Vagan A. Akovbian, M.D., Ph.D., Russian Ministry of Health Central Institute, Moscow, Russia; Gale Burstein, M.D., M.P.H, American Academy of Pediatrics; Willa Brown, M.D., M.P.H., American College of Preventative Medicine; Mike Catchpole, M.D., PHLS Communicable Disease Surveillance,

England; Tom Cox, M.D., American Social Health Association; William Dumas, R.N., National Coalition of STD Directors; Antonio C. Gerbase, M.D., World Health Organization; Sharon Hillier, Ph.D., Infectious Disease Society of Obstetrics and Gynecology; Louella Klein, M.D., American College of Obstetrics and Gynecology; David J. Magid, M.D., M.P.H, Managed Care Colorado; Rafael Mazin, M.D., Pan American Health Organization; Gregory J. Moran, M.D., American College of Emergency Physicians; Donna Richmond, M.P.H., R.N., Association of Reproductive Health Professionals; Anthony Schaeffer, M.D., American Urological Association; Felicia Stewart, M.D., American Social Health Association; Stephen K. Tyring, M.D., Ph.D., American Academy of Dermatology; Leonard B. Weiner, M.D., American Academy of Pediatrics; Tom Wong, M.D., M.P.H., Health Canada.

CDC/Division of STD Prevention (DSTDP)/STD Treatment Guidelines 2002 Project Coordinators: Kimberly A. Workowski, M.D., DSTDP; William C. Levine, M.D., M.Sc., DSTDP.

Project Manager: Donald F. Dowda, DSTDP.

Co-Moderators: Lyn Finelli, Ph.D., DSTDP; Robert Johnson, M.D., DSTDP; Lauri Markowitz, M.D., DSTDP.

Presenters: Consuelo M. Beck-Sague, M.D., Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP); Jonathan E. Kaplan, M.D., DHAP/NCHSTP; Emilia Koumans, M.D., DSTDP; John Moran, M.D., DSTDP; Juliette Morgan, M.D., NCID; George P. Schmid, M.D., M.Sc, DSTDP; Madeline Sutton, M.D., DSTDP; Susan Wang, M.D, MPH, DSTDP.

Consultants: Sevgi O. Aral, Ph.D., DSTDP; Stuart M. Berman, M.D., DSTDP; Joanna Buffington, M.D., DVRD/NCID; Carol Ciesielski, M.D., DSTDP; George Counts, M.D., DSTDP; Julia Schillinger, M.D., M.Sc., DSTDP; Katherine Stone, M.D., DSTDP; Judith N. Wasserheit, M.D., M.P.H., DSTDP.

Support Staff: Valerie Barner, DSTDP; Garrett K. Mallory, DSTDP; Deborah McElroy, DSTDP; Porsha Williams, Contractor.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

The information in this report updates the "1998 Sexually Transmitted Diseases Treatment Guidelines" (MMWR 1998;47[No. RR-1]).

GUIDELINE AVAILABILITY

Electronic copies: Available from the Centers for Disease Control and Prevention (CDC) Web site:

- HTML version
- Portable Document Format (PDF)

Print copies: Available from the Centers for Disease Control and Prevention, MMWR, Atlanta, GA 30333. Additional copies can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325; (202) 783-3238.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Workowski KA, Levine WC, Wasserheit JN. U.S. Centers for Disease Control and Prevention guidelines for the treatment of sexually transmitted diseases: an opportunity to unify clinical and public health practice. Ann Intern Med. 2002 Aug 20;137(4):255-62. Electronic copies: Available through Annals of Internal Medicine Online.
- Sexually Transmitted Diseases Treatment Guidelines 2002 for PDA or Palm OS. Available from the CDC National Prevention Information Network (NPIN) Web site.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on August 19, 2002.

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